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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/621,788	07/21/2000	Daniele Casalini	12707 P03	4984

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Jerry Cohen
Perkins, Smith & Cohen
One Beacon Street
Boston, MA 02108

EXAMINER

KEEHAN, CHRISTOPHER M

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 06/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

71-6

Office Action Summary

Application No.

09/621,788

Applicant(s)

CASALINI, DANIELE

Examiner

Christopher M. Keehan

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1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: on pages 13-16 of the Specification, there is only one sentence in the middle of each page, describing Illustrations 1-4, respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19 and 20 provide for the use of a hard material, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 19 and 20 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, and 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Erickson et al. (5,645,619). Regarding Claims 1-4, Erickson et al. disclose a surface coated hard material with a hardness of ≥ 10 GPa, more specifically > 15 GPa, characterized in that aluminum oxide is the basis of the hard material, more specifically calcined and/or sintered alumina (col.11, lines 40-56 and col.13, lines 15-64).

Regarding Claim 5, Erickson et al. disclose siloxane polymers (col.6, lines 30-39). It is the Examiner's position that the instantly claimed structure is the basic structure of a siloxane polymer.

Regarding Claims 9-11, Erickson et al. disclose a quantity of polysiloxane on its surface amounts as little as 0.05 weight percent (col.7, line 65-col.8, line 13 and col.6, lines 30-39), which is included in the instantly claimed ranges.

Regarding Claim 12, Erickson et al. disclose a hard material grain is mixed with a polysiloxane (col.11, line 59-col.12, line 38 and col.6, lines 30-39).

Regarding Claim 13, Erickson et al. disclose the hard grain is exposed to a temperature of about 50-200°C prior to the mixing process (col.10, lines 64-66), which is included in the instantly claimed range.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson et al. (5,645,619) in view of Swei (5,182,173). Erickson et al., as applied to Claims 1 and above, are as set forth and incorporated herein. Erickson et al. do not appear to specifically disclose a polysiloxane with the instantly claimed characteristics. However, the instantly claimed polysiloxane appears to be a very common polysiloxane. Swei discloses a coated alumina surface (col.2, lines 30-32) coated with a polysiloxane with the instantly claimed characteristics (col.2, line 33-col.5, line 60). If not inherently disclosed by Erickson et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the polysiloxane of Swei in the material of Erickson et al. because Swei teaches that coating an alumina surface with a well known polysiloxane produces improved toughness resulting in a higher quality product.

Regarding Claims 17 and 18, it appears that the Erickson et al. combination does not specifically disclose a viscosity. However, Swei discloses the claimed polysiloxane with a molecular weight of between 500 and about 80,000 (col.2, lines 45-62), which

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appears to be included in the molecular weight of the instant invention (Claim 5).

Therefore, because it is known in the art that the molecular weight has a direct affect on the viscosity, and the materials (polysiloxane) of Swei are at least similar to that of the instant invention, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have achieved an at least similar viscosity in Swei as instantly claimed because at least similar processes can reasonably be expected to yield products which inherently have the same properties. *In re Spada* 15 USPQ 2d 1655 (CAFC 1990); *In re DeBlauwe* 222 USPQ 191; *In re Wiegand* 86 USPQ 155 (CCPA 195).

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson et al. (5,645,619). Erickson et al., as applied to Claims 1 and 6-8 above, are as set forth and incorporated herein. Regarding Claims 14 and 15, Erickson et al. disclose drying a coated hard grain so that the individual particles do not stick together (col.12, lines 53-58). It appears Erickson et al. do not specifically disclose a temperature range as instantly claimed. However, it is the Examiner's position that the temperature of Erickson et al. is a result-effective variable, i.e., a variable which achieves a recognized result. Therefore, the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Boesch*, 205 USPQ 215.

Regarding Claim 16, Erickson et al. do not appear to specifically disclose an aqueous polysiloxane emulsion. Erickson et al. do disclose that the medium for the

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hard material mixture is preferred to be water, more preferably deionized water (col.5, lines 14-21). Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to have added an aqueous polysiloxane to the hard surface mixture of Erickson et al. because Erickson et al. teaches that an aqueous medium, preferably one of deionized water, produces a dispersion with no unnecessary, interfering ions present, such as that entailed with a non-aqueous medium, resulting in a more stable environment.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Keehan whose telephone number is (703) 305-2778. The examiner can normally be reached on Monday-Friday, from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Christopher Keehan *cmk*

May 31, 2002



Robert Dawson
Supervisory Patent Examiner
Technology Center 1700